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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,385	12/29/2004	Roberto Lanfredi	262956USOX PCT	8970
22850	7590	02/21/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
LSTVOYB, GREGORY				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
02/21/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/518,385

**Applicant(s)**

LANFREDI ET AL.

**Examiner**

GREGORY LISTVOYB

**Art Unit**

1796

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5-8 and 10-22 is/are pending in the application.
- 4a) Of the above claim(s) 15, 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8, 10-14, 16-17, 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/14/2008 has been entered.

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***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5-8, 10-11, 13-14 rejected under 35 U.S.C. 102 (b) as being anticipated by Alvares et al (US patent 3991020) herein Alvares or Ingram et al (US patent 4692472) herein Ingram as evidenced by Merck Index (Merck and Co, 1996, p.1735) herein Merck.

Alvares or Ingram disclose method of making beads of expandable vinylaromatic polymers

comprising:

a) a matrix obtained by polymerizing 50-100% by weight of one or more vinylaromatic monomers (Examples 1-2)

b) 1-10% by weight, calculated with respect to the polymer (a), of an expanding agent englobed in the polymeric matrix.

Regarding claim 5 (c) Alvares or Ingram disclose Zn Stearate. As evidenced by Merck, Zn Stearate contains 13.5-15 wt % of ZnO. Thus, the amount of ZnO in Alvares's or Ingram's composition is around 100 ppm, meeting the limitation (C) of claim 1. It is reasonable to believe that Applicant uses conventional ZnSt.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 rejected under 35 U.S.C. 103 (a) as being unpatentable over Niachwiadowicz et al (US 3558534) herein Niachwiadowicz and evidences by Alvares. Niachwiadowicz discloses:

a) a matrix obtained by polymerizing 50-100% by weight of one or more vinylaromatic monomers (see Examples 1-2)

b) 1-10% by weight, calculated with respect to the polymer (a), of an expanding agent englobed in the polymeric matrix (see Example 1).

c) Zn Stearate or Stearic acid as antilumping agent (see Column 5, line 35)

Niachwiadowicz does not teach amount of antilumping agent in his composition.

Alvares discloses similar beads of expandable vinylaromatic polymers (i.e. polystyrene, Abstract), has an anti-lumping agent Zn Stearate at 0.07% wt.

Note that Niachwiadowicz interchangeably uses Zn Stearate or Stearic acid anti-lumping agent.

Therefore, it would have been obvious to a person of ordinary skills in the art to to use Stearic Acid as anti-lumping agent, since it expressly disclose by Niachwiadowicz.

Claims 1, 2, 12 rejected under 35 U.S.C. 103 (a) as being unpatentable over Harclerode et al (US patent 5240657) herein Harclerode in combination with Ingram as evidenced by Niachwiadowicz.

Harclerode discloses:

a) a matrix obtained by polymerizing 50-100% by weight of one or more vinylaromatic monomers (Example 1) with molecular weight Mw within the range of

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200000-220000 (Column 19, line 52) at the presence of suspending agent, initiating agent and expanding agent (Examples 1 and 2),

b) 1-10% by weight, calculated with respect to the polymer (a), of an expanding agent englobed in the polymeric matrix (3.1% g of pentane, Example 2).

Harclerode does not disclose an antilumping agent in his composition.

Ingram discloses beads of expandable vinylaromatic polymers (i.e. based on styrene and DVB, Example 1) comprising:

a) a matrix obtained by polymerizing 50-100% by weight of one or more vinylaromatic monomers (Example 1)

b) 1-10% by weight, calculated with respect to the polymer (a), of an expanding agent englobed in the polymeric matrix (7 g of pentane/100g polymer)

Regarding claim 1 (c) Ingram discloses 0.12% of Zn Stearate as an anti-lumping agent (Example 2).

It would have been obvious to a person of ordinary skills in the art to use antilumping agent in Harclerode's composition, since it prevents coalescence of the beads, improving their handling and processability.

As evidences by Niachwiadowicz Zn Stearate can be replaced with Stearic acid. According to MPEP 2144.07, the selection of a known material based on its suitability for its intended use supported a *prima facie* obviousness determination in *Sinclair &*

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*Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945) , 325 U.S. at 335, 65 USPQ at 301, see also also *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988).

Therefore, it would have been obvious to a person of ordinary skills in the art to use Stearic acid instead of Zn Stearate, since Stearic acid is known material based on its suitability for its intended use.

Claims 1, 3, 5-7 rejected under 35 U.S.C. 103(a) as being unpatentable over Alvares as evidences by Niachwiadowicz.

Alvares discloses beads of expandable vinylaromatic polymers (i.e. polystyrene, abstract) comprising:

a) a matrix obtained by polymerizing 50-100% by weight of one or more vinylaromatic monomers (Examples 1-2)

b) 1-10% by weight, calculated with respect to the polymer (a), of an expanding agent englobed in the polymeric matrix (8 wt % of pentane/isopentane mixture, which boiling point is within the range of 10-100C).

Regarding claim 1 (c) Alvares discloses 0.07% of Zn Stearate.

Regarding Claim 3, average diameters of the particles are within the range 0.1-5 mm.

As evidences by Niachwiadowicz Zn Stearate can be replaced with Stearic acid.

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According to MPEP 2144.07, the selection of a known material based on its suitability for its intended use supported a *prima facie* obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945) , 325 U.S. at 335, 65 USPQ at 301, see also also *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988).

Therefore, it would have been obvious to a person of ordinary skills in the art to use Stearic acid instead of Zn Stearate, since Stearic acid is known material based on its suitability for its intended use.

Regarding claims 5-7, Alvares teaches a suspension polymerization in the presence of suspending agent, initiation system and expanding agent (Examples 1-2) at the presence of ethylene-propylene oxide copolymer (column 2, line 55 and Examples 1-2).

Claims 1, 3, 5-8, 10-11, 13-14, 16, 19-22 rejected under 35 U.S.C. 103 (a) as being unpatentable over Nonweiler (US 3457205) herein Nonweiler in combination with Bardman et al (US 2003/0018103) herein Bardman.

Nonweiler discloses a composition for making coated expanded polystyrene foam.

Nonweiler teaches

a) a matrix obtained by polymerizing 100% by weight of polystyrene beads ranging in size between 16 and 40 mesh (Example 1)

b) 5.3% by weight, calculated with respect to the polymer (a), of an expanding agent englobed in the polymeric matrix.

c) 0.2-2% of organic and inorganic pigment (see Column 4, line 5).

Nonweiler does not disclose that inorganic pigment is Iron Oxide.

Bardman disclose a polystyrene beads containing Iron Oxide pigment. (see line 0042).

According to MPEP 2144.07, the selection of a known material based on its suitability for its intended use supported a *prima facie* obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945), 325 U.S. at 335, 65 USPQ at 301, see also also *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988).

Therefore, it would have been obvious to a person of ordinary skills in the art to use Ferric Oxide as an inorganic pigment in Nonweiler, since Ferric Oxide is known material based on its suitability for its intended use.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-3, 5-8, 10-17, 20-22 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY LISTVOYB whose telephone number is (571)272-6105. The examiner can normally be reached on 10am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GL

/Rabon Sergent/

Primary Examiner, Art Unit 1796

